

CLAIMS

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is as follows:

Sub
A1

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- 1 1. A method for designing or deploying a communications network,
2 comprising the steps of:
3 providing a computerized model which represents a physical
4 environment in which a communications network is or will be installed,
5 said computerized model providing a display of at least a portion of said
6 physical environment;
7 providing performance attributes for a plurality of system
8 components which may be used in said physical environment, a number of
9 said system components having associated with them frequency dependent
10 characteristics of said system component;
11 selecting specific components from said plurality of system
12 components for use in said computerized model;
13 representing said selected specific components in said display;
14 running prediction models using the computerized model and said
15 performance attributes to predict performance characteristics of a
16 communications network composed of said selected specific components,
17 said prediction models utilizing said frequency dependent characteristics in
18 calculations which predict said performance characteristics of said
19 communications network.
- 1 2. The method of claim 1 wherein said frequency dependent
2 characteristics define electrical properties of said system components at at
3 least two different frequencies.

59

1 3. The method of claim 1 further comprising the step of generating a bill
2 of materials containing cost information for said selected specific
3 components utilized in said communications network.

Sub B4
1 4. The method of claim 1 wherein said cost information comprises a
2 maintenance schedule for selected specific components.

1 5. The method of claim 1 wherein said display is three dimensional.

1 6. The method of claim 1 wherein said system components allow
2 converting between radio frequency and optical frequency.

1 7. The method of claim 1 wherein said system components allow
2 converting between optical frequency and baseband frequency.

1 8. The method of claim 1 wherein said system components allow
2 converting between radio frequency and baseband frequency.

1 9. The method of claim 1 further comprising the step of identifying errors
2 in physical media connections for two or more specific components
3 selected in said selecting step.

Sub A2
1 10. An apparatus for designing or deploying a communications network,
2 comprising:
3 a means for providing
4 (I) a computerized model which represents a physical environment
5 in which a communications network is or will be installed, said
6 computerized model providing a display of at least a portion of said
7 physical environment, and

8 (II) performance attributes for a plurality of system components
9 which may be used in said physical environment, a number of said system
10 components having associated with them frequency dependent
11 characteristics of said system component;
12 a means for selecting specific components from said plurality of
13 system components for use in said computerized model;
14 a means for representing said selected specific components in said
15 display; and
16 a means for running prediction models using the computerized
17 model and said performance attributes to predict performance
18 characteristics of a communications network composed of said selected
19 specific components, said prediction models utilizing said frequency
20 dependent characteristics in calculations which predict said performance
21 characteristics of said communications network.

1 11. The apparatus of claim 10 further comprising a means for generating a
2 bill of materials containing cost information for said selected specific
3 components utilized in said communications network.

1 12. The apparatus of claim 11 wherein said cost information comprises a
2 maintenance schedule for selected specific components.

1 13. The apparatus of claim 10 wherein said display is three dimensional.

1 14. The apparatus of claim 10 further comprising a means for identifying
2 errors in physical media connections for two or more selected specific
3 components.